TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-05-20-04** **Date: 24-05-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore.
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Culverts in Bagalagunte in ward no. 14
Agency	:	Sri. N. Thippeswamy, #09, 1st Cross, Saraswathi Puram, Bangalore gate, Chithraduraga.
Customer's Reference	:	EE/DD/WO/22/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-05-17
Sample ID No	:	2017-05-20-04/01
Sample Type	:	Zuari 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	22-05-17

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	3.12	_
2	Finess by Air permeablity method (m^2/kg, Min)	278.6	225m^2/kg, Min
3	Density (gm/cc)	3.21	_
4	Standard Consistency (%)	27.5%	Not specified
5	Initial Setting time	215 minutes	Not less than 30 minutes
6	Final Setting time	295 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harshitha

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-05-20-04** **Date: 19-06-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore.
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Culverts in Bagalagunte in ward no. 14
Agency	:	Sri. N. Thippeswamy, #09, 1st Cross, Saraswathi Puram, Bangalore gate, Chithraduraga.
Customer's Reference	:	EE/DD/WO/22/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-05-17
Sample ID No	:	2017-05-20-04/01
Sample Type	:	Zuari 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	22-05-17

Compressive Strength			
Sl.No.	**Physical properties**	**Results**	**Requirement as per IS 12269: 2013**
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.5N/mm^2	Not less than 37 N/mm^2
3	28 Days	55.5N/mm^2	Not less than 53 N/mm^2

Note:

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-20-04** **Date: 24-05-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore.
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Culverts in Bagalagunte in ward no. 14
Agency	:	Sri. N. Thippeswamy, #09, 1st Cross, Saraswathi Puram, Bangalore gate, Chithraduraga.
Customer's Reference	:	EE/DD/WO/22/17-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	20-05-17
Sample ID No	:	2017-05-20-04/02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	20-05-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	495	495	3.3	96.7	90-100
3	20 mm	7373	7868	52.5	47.5	30-70
4	10 mm	5117	12985	86.6	13.4	10-35
5	4.75 mm	1505	14490	96.6	3.4	0-5
6	Pan	510	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-05-20-04** **Date: 24-05-2017**

Sample ID No : 2017-05-20-04/02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.1	
3	Specific Gravity	2.62	_
4	Bulk Density(Loose) (Kg/l)	1.53	_
5	Bulk Density(Compacted) (Kg/l)	1.59	_
6	Water Absorption(%)	0.19	_

Note:

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Prepared by
Harshitha

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FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-20-04** **Date: 24-05-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore.
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Culverts in Bagalagunte in ward no. 14
Agency	:	Sri. N. Thippeswamy, #09, 1st Cross, Saraswathi Puram, Bangalore gate, Chithraduraga.
Customer Reference	:	EE/DD/WO/22/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-05-17
Sample ID No	:	2017-05-20-04/02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	20-05-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	176	176	3.5	96.5	90-100
3	10 mm	2296	2472	49.4	50.6	25-55
4	4.75 mm	2381	4853	97.1	2.9	0-10
5	Pan	147	5000	100	0	_

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TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2017-05-20-04** **Date: 24-05-17**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore.
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Culverts in Bagalagunte in ward no. 14
Agency	:	Sri. N. Thippeswamy, #09, 1st Cross, Saraswathi Puram, Bangalore gate, Chithraduraga.
Customer's Reference	:	EE/DD/WO/22/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-05-17
Sample ID No	:	2017-05-20-04/03
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	20-05-17
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0	100	100	100	100	100
2	4.75 mm	26	26	2.6	97.4	90-100	90-100	90-100	95-100
3	2.36 mm	131	157	15.7	84.3	60-95	75-100	85-100	95-100
4	1.18 mm	226	383	38.3	61.7	30-70	55-90	75-100	90-100
5	600 micron	219	602	60.2	39.8	15-34	35-59	60-79	80-100
6	300 micron	225	827	82.7	17.3	5-20	8-30	12-40	15-50
7	150 micron	89	916	91.6	8.4	0-10	0-10	0-10	0-15
8	Pan	84	1000	100	0	---	---	---	---
Result :The tested Sample Conforms to Grading Zone II									

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